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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/430,297	10/29/1999	MARK SCOTT	1848.0040000	7056

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EXAMINER	
WILSON, ROBERT W	

ART UNIT	PAPER NUMBER
2661	16

DATE MAILED: 01/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/430,297	SCOTT, MARK	
	Examiner	Art Unit	
	Robert W Wilson	2661	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 December 2003* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-22* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *1-4,6-9,12-15 and 18-22* is/are allowed.

6)☒ Claim(s) *5,10,11,16 and 17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

1.0 The application of Mark Scott for a "SYSTEM, METHOD AND COMPUTER PROGRAM PRODUCT FOR POINT-TO-POINT BANDWIDTH CONSERVATION IN AN IP NETWORK" filed on October 29, 1999 was examined. The examiner withdraws the finality of the action in order to allow the applicant time to respond. Claims 1-22 are pending.

Allowable Subject Matter

2.0 The present invention is directed to a communication device which "compresses data streams from a plurality of concurrent calls from a plurality of channels into packets; aggregating said packets into the larger data packet, said data packet including information for synchronizing a current channel state at the originating gateway with a record of said channel state at the destination gateway". The closest prior art Goldberg (U.S. Patent No.: 6,389,038 B1) teaches a method or system combining or compressing data streams into a larger data packet by providing synchronization bits which are utilized between the gateways and the multiplexer. The closest prior art Goldberg (U.S. Patent No.: 6,389,038 B1) does not disclose either singularly or in combination anticipate or render the following claim limitation obvious:

"said data packet including information for synchronizing a current channel state at the originating gateway with a record of said channel state at the destination gateway" as claimed in Claims 1, 6, & 12.

In Addition:

Claims 2-4 and 18-20 are also allowable because they depend upon Claim 1.

Claims 7-9 and 21-22 are also allowable because they depend upon Claim 6.

Claims 13-15 are also allowable because they depend upon Claim 12.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3.0 Claims 5, 10, & 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Quarni (U.S. Patent No.: 6,438,105B1 dated February 8, 1999) in view of Goldberg (U.S. Patent No: 6,389,038 with provisional application date of January 26, 1999)

Referring to Claim 5, Quarni teaches: regenerating missing or damaged data packet transmitted (FACs data using UDP protocol over an IP network per Fig 1. Error correction and retransmission of packets per Abstract. Also Internet Telephony is taught per col 4 line 51. It would be obvious to one of ordinary skill in the art at the time of the invention to utilize the error correction of Quarni in an Internet Telephony system because deficiencies to UDP protocol are being resolved that are also common problems in the Internet Telephony because UDP is also used)

Transmitting a check sequence after every third data packet (Frame check sequence trailer are shown in Figure 10 around four packets, 44A-44D, as well as having a frame check sequence trailer at the end of each packet. It would be obvious to one of ordinary skill in the art at the time of the invention to have a frame check sequence associated with three packets instead of four packets.)

Using a parity system to regenerate the missing or damaged data (error correction through retransmission of packets per Abstract or col 10 line 58-col 11 line 7).

Quarni does not particularly call for: reducing packet overhead but teaches frame check sequence and also teaches a method of correcting errors through the retransmission of packets.

Goldberg teaches reducing packet overhead per Abstract.

It would be obvious to one of ordinary skill in the art at the time of the invention to add the reduction of packet overhead of Goldberg to the retransmission of packets of Quarni in systems that utilize UDP in order to build a system that sends a frame sequence after every third packet.

Referring to Claim 10, Quarni teaches: Internet Telephony system (col 4 line 51);

Redundancy means for transmitting a check sequence data packet every third packet (Frame check sequence trailer are shown in Figure 10 around four packets, 44A-44D, as well as having a frame check sequence trailer at the end of each packet. It would be obvious to one of ordinary skill in the art at the time of the invention to have a frame check sequence associated with three packets instead of four packets.)

Means for regenerating missing or damaged data with information located inside check sequence data packet(The frames are checked via FCS as well as associated sequence numbers and if the

sequence number is missing or FCS analysis detects an error then the frame is retransmitted per col 2 line 28-col 3 line 25)

In Addition:

Parity system (col 10 lines 59-col 11 line 70) as claimed in **Claim 11.**

Quarni does not particularly call for: reducing packet overhead but teaches frame check sequence and also teaches a method of correcting errors through the retransmission of packets.

Goldberg teaches reducing packet overhead per Abstract.

It would be obvious to one of ordinary skill in the art at the time of the invention to add the reduction of packet overhead of Goldberg to the retransmission of packets of Quarni in systems that utilize UDP in order to build a system that sends a frame sequence after every third packet.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4.0 Claims 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goldberg (U.S. Patent No: 6,389,038 with provisional application date of January 26, 1999) in view of Quarni (U.S. Patent No.: 6,438,105B1 dated February 8, 1999) further in view of Borella (U.S. Patent No.: 6,434,606B1 dated August 13, 2002)

Referring to Claim 16, Goldberg teaches: A computer program product comprising a computer useable medium having computer program logic recorded thereon for enabling originating and destination gateways to transmit or receive data streams or data packets in an Internet telephony system (Fig 4 shows transmitting between originating and destination gateways in an Internet telephony system. An integrated MUX/Router/Gateway performs this function. The MUX is a computer per col 6 line 41-col 7 line 70; therefore it would be obvious that these functions are performed by a computer program product); In addition Goldberg teaches reducing packet overhead per Abstract.

Goldberg does not particularly call for: configurable to tradeoff between increased tolerance to loss and bandwidth and a second computer program product means for regenerating missing or damaged data in the packet comprising; a first computer program product means for transmitting a check sequence data packet at regular packet intervals, configurable to tradeoff between increased tolerance to loss and bandwidth; and a second computer program product means for regenerating the missing or damaged data by using information located inside of said check sequence data packet

Quarni teaches: a second computer program product means for regenerating missing or damaged data in the data packet (Abstract); a first computer program product means for transmitting a check sequence data packet at regular packet intervals, configurable to tradeoff between increased tolerance to loss and bandwidth (FACs data using UDP protocol over an IP network per Fig 1. Error correction and retransmission of packets per Abstract. Also Internet Telephony is taught per col 4 line 51. It would be obvious to utilize the error correction of Quarni in an Internet Telephony system because deficiencies to UDP protocol are being resolved that are also common problems in the Internet Telephony because UDP is also used. It would also be an obvious to one of ordinary skill in the art at the time of the invention that increasing the amount of error correction increases the packet overhead and therefore lessens the bandwidth according to the teaching of Goldberg. Consequently it would be obvious to one of ordinary skill in the art to adjust the amount of packet overhead versus the amount of error correction in order to optimize the tradeoff between throughput and loss tolerance. It would be obvious to one of ordinary skill in the art at the time of the invention that these algorithms which utilize UDP protocol which is a computer communication protocol could be implemented in hardware and software as a computer program product.)

a second computer program product means for regenerating the missing or damaged data by using information located inside of said check sequence data packet (error correction through retransmission of packets per Abstract or col 10 line 58-col 11 line 7. It would be obvious to one of ordinary skill in the art at the time of the invention that these algorithms which utilize UDP protocol which is a computer communication protocol could be implemented in hardware and software as a computer program product.)

In Addition:

a computer program product comprising a third computer program prdouct means for using a parity system to regenerate the missing or damaged data (col 10 line 59-col 11 line 8 or col 2 line 29-col 3 line 25 or Abstract) as claimed in **Claim 17**

It would be obvious to one of ordinary skill in the art at the time of the invention to add to the retransmission of packets of Quarni to the reduction of packet overhead of Goldberg in

systems that utilize UDP in order to build a system that sends a frame sequence after every third packet.

The combination of Goldberg and Quarni do not particularly call for: configurable to tradeoff between increased tolerance to loss and bandwidth:

Borella teaches: tradeoff between increased tolerance to loss and bandwidth (col 2 lines 3-20)

It would be obvious to one of ordinary skill in the art at the time of the invention to add teaching that there is a tradeoff associated QOS or loss in a real time system between redundancy of information packeted and bandwidth to the system of the combination of Goldberg and Quarni in order to build a real time system or VoIP system.

Response to Arguments

5.0 Applicant's arguments filed 12/11/03 have been fully considered but they are not persuasive relative to claims 5, 10-11, & 16-17.

The examiner respectfully disagrees with the applicant's argument that Lewis does not teach or suggest "transmitting a check sequence data packet..." or "regenerating the missing or damaged data". Lewis teaches "transmitting a check sequence data packet..." as well as "regenerating the missing or damaged data" as well as "checksum" per col 24 line 58-col 56 line 20". Lewis teaches "guaranteed delivery " per col 25 line 8. The examiner interprets "guaranteed delivery" to mean "regenerating the missing or damaged data". It is within the level of one skilled in the art to adjust parameters associated with TCP/IP in order to "guarantee delivery".

Conclusion

6.0 Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert W Wilson whose telephone number is 703/305-4102. The examiner can normally be reached on M-F (8:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas Olms can be reached on (703) 305-4703. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

Robert W. Wilson

Robert W Wilson
Examiner
Art Unit 2661

RWW
January 5, 2004